Defining "NFT" in historical context

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5 Collected

NFT is an odd three-letter acronym. Even the people who are involved in NFTs are not exactly sure how to define an NFT. No wonder the normie world is confused. Expanding the acronym just makes things worse: Non-Fungible Token is still ambiguous.

Confusion intensifies

Is NFT just a receipt? Is it the actual artwork? What about editions? What even is a token?

These details are being discussed even more among Historical / Vintage NFT communities because early NFTs have antique value. These early assets also indicate pioneering achievements, which collectors love to celebrate. But what if what you collected is not an NFT? Or what if there are way more, earlier NFTs than the ones you already collected? Financial motives are sometimes at the center of these debates.

In this article, I'll go through how we've come to adopt the term "NFTs" and how the semantics of "non-fungibility" and "tokenness" are shaping the debates in the Historical NFT community today.

Before we go into the technicals, let's look at what NFTs enable that cannot be enabled otherwise.

What's So Significant About an NFT

What have NFTs specifically brought to the digital art scene (or to the digital collectibles scene)?

Digital art has been around for a while. But they never attracted collectors at large, at least not the way NFTs did. Beyond digital art, even cryptographic artworks were around for a while.

I'll go one step further.

In 2011, someone put messages on the Bitcoin blockchain and created ASCII art with those messages. This was a tribute to early Bitcoin dev Len Sassaman who had recently died. It contained two ASCII images, one of Len Sassaman and one of Ben Bernanke, the Chairman of the United States Federal Reserve at the time.

BitLen ASCII

"BitLen ASCII" is a remarkable artwork in blockchain history that will forever be remembered. It beautifully resides on the blockchain for everyone to see. But we are back to the original question: Why are NFTs more popular than blockchain entry artworks?

Let's finally answer it: With NFTs, digital artworks became "OWNABLE". While "BitLen ASCII" was significant, it wasn't ownable. The philosophy of ownership deserves its own article but the fact is; `blockchains for the first time allowed decentralized ownership of digital collectibles` . The stark differences from "corporation-issued collectibles" such as Beanie Babies or Pokemon Cards made NFTs (or decentralized digital collectibles, or blockchain collectibles) a huge deal for collectors. This, in return, helped more digital artists and creators onboard into NFTs. This is why NFT historians tend to consider this decentralized collectibility as the main characteristic that started the movement.

https://twitter.com/punk6529/status/1505937266782486533

This is also why -for better or worse- the concept of “token” was brought up.

“Token” is an abstract term. Tokens do not physically exist. It’s a shorthand way to call the 1s and 0s of the software that determines an ownable asset. “The owned asset” is represented by the “token”.

Join tokens with humans’ innate desire to own unique things, we ended up having non-fungible tokens, or NFTs. And so the infighting began...

Debates

Semi-fungibility

If you join discord servers of some projects, you will see people objecting to significant collectibles (such as Rare Pepes, Curio Cards, or JakNFT editions) being called “NFTs” because they are semi-fungible.

Of course, these assets are still different from completely fungible tokens, as they are non-fungible within a collection. But it is also true that different editions of the same token can be exchanged without losing any value.

Semi-fungible tokens

If we would not be stuck with the term "NFTs", all of these would probably be called "Decentralized Digital Collectibles". But since we are stuck with the term "NFTs", it makes more sense to focus on NFTs' spirit, i.e. what NFTs brought to the collectors and art scene.

Technical terms aside, these artworks certainly represent the blockchain revolution's benefits to artists and collectors; because they are "ownable collectibles whose ownership can be verified in a decentralized way". This is why I think it's fair to call them NFTs.

Disclaimer: As of this writing, I own three semi-fungible tokens in my collection of 80+ NFTs.

Collectibility

There are also fully-fungible tokens that claim an "NFT" status. They are interchangeable amongst themselves equally, and they are not part of a collection. Critics argue that since they are fully fungible tokens, they do not deserve the NFT status.

Definitions get blurry here. Technically these are fully fungible tokens, and critics are right that some of them are created for fully fungible purposes. On the other hand, some of these tokens still have collectibility value, and they are on decentralized networks. So the question then becomes, "what is a collectible?"

Defining “collectible” is a speculative attempt, so I will only write my observations of other collectors.

People seem to attach a “collectibility value” to the scarce assets that either had some collectibility intention when issued or were a milestone in the NFT timeline.

One such example is the JOLLYROGER on Dogeparty, from 2014. It is a Dogeparty token with an image attached to it at issuance. It’s not part of a collection and each token is fully fungible within the JOLLYROGER; but due to having an image attached at issuance, it displays collectability intention during its creation.

But what if there was no image attached?

- Prominent blockchain artist Rhea Myers created MYSOUL in 2014 as a conceptual art piece. She is not selling this piece, but it was an ownable & tradable art, and this makes it a collectible (even when we cannot collect it).
- NILIcoins on Counterparty was issued with prescribed artistic intentions despite not having an image attached. The early timestamp and the fact that it was a declared art project so long ago make the project significant.
- Also on Counterparty are XCPinata assets which were too issued with artistic intentions. Even though the actual images were attached in 2021, the original intentions make this project a significant collectible.

Sometimes an asset becomes a collectible retroactively, even if it was not intended that way originally. TEST token on Counterparty (2014) is the first Counterparty token and has a supply of 400. Due to its nature of being the first on a chain that gave birth to the crypto art movement (Rare Pepes) and due to its scarcity, it seems to have a collectible status for collectors.

One could also argue Bitcoins mined in early blocks could have a “collectible” status. These coins were explicitly created for monetary reasons, they do not have images and they are not scarce at large. Also, the only thing that makes them unique is their UTXOs which are forced to burn when transferred. Perhaps the uniqueness and therefore collectible value of these coins can be excavated when the events on the chain are tracked to their source. Casey Rodarmor is currently working on a scheme called ordinals, where satoshis are numbered and tracked across transactions. Time will tell how early ordinals are viewed by collectors.

Some fungible and semi-fungible tokens with collectibility claim

Disclaimer: As of this writing, I don't own any fungible collectibles in my collection of 80+ NFTs.

Namecoin NFTs

Debate on Namecoin NFTs focuses on another aspect of non-fungible tokens: The token.

Namecoin NFTs are the first NFTs. Minted on April 21st, 2015 the simple text "d/bitcoin" domain name became the first NFT.

Namecoin assets are non-fungible and they are ownable, transferable tokens. There is no debate on this definition specifically. Vitalik Buterin, the founder of Ethereum, referred to Namecoin NFTs on the first page of the Ethereum whitepaper (he used the term "non-fungible assets" but bear in mind that the term "NFT" was only adopted in 2017).

The fact that Namecoin NFTs are the first NFTs is largely accepted. The bigger debate is about their *expiration*. Yes, `Namecoin domains expire after ~9 months if the owner does not renew them.`

Some argue that if you have to renew your NFT, this feels like renting and does not represent real ownership which is what web3 is about.

This analogy would be false, as Namecoin NFTs provide the owner with complete ownership. Unlike renting, the decision to continue the ownership solely relies on the owners themselves. The renewal is akin to paying an extremely low infrastructure tax to the miners for the maintenance of the network (not unlike the tax you pay for the house you own, which would be taken away from you if you don't pay it). As of this writing, 50 years of renewals cost ~$1.

But the bigger question on Namecoin NFTs is about the provenance because there is an ongoing debate about the age of Namecoin NFTs that expired and then got re-registered (To be clear, there are Namecoin NFTs from 2011 that never expired. This debate does not apply to them).

Namecoin NFT Provenance - Technical

What happens to Namecoin domains when the domain name ownership expires and gets re-registered after a while?

Namecoin is designed around domain names, but when a domain name gets registered the first time, it is represented by a particular identifier (UTXO design) to allow its trading. The chain of these identifiers (UTXOs) can be considered a special coin, which we will call a "***colored coin***" in this article. Rhea Myers extensively wrote about Namecoin's UTXO design here.

When a Namecoin domain expires, the UTXO becomes unspendable. In practice, it is often called "burnt" (in reality it is simply unspendable), because when the domain name is re-registered later, a new UTXO chain starts. This would mean that when a domain name expires, the chain of events where that domain was represented breaks. During the re-registration, the Namecoin protocol does not make a distinction between a never-used domain name and a previously expired domain name. This fact may support the argument that the expiration is physically burning the original token.

On the other hand, as mentioned before, Namecoin is designed around names. Names are unique identifiers themselves and they run on that way immutably in a cryptographically secured blockchain. The history of the unique name, previous updates and transactions remain on-chain, as is the case with blockchains.

The aforementioned "UTXO chains" are actually formed of individual UTXO stations. Each UTXO has an address and domain names are attached to these UTXOs. When Bob makes a standard domain name transfer to Alice, a 0.01NMC is spent on Bob's side where the domain name is attached, and a new 0.01NMC is created on Alice's side where the domain name is attached. The thing that physically (for lack of a better term) moves from one address to another during a typical transfer is the domain name, not UTXOs. The design choice of a typical domain name transfer supports the argument that the domain name is the unique identifier and the token, and it never burns even after expiration.

In fact, the treatment of names as unique identifiers is visible directly in Namecoin's consensus code.

If the names are the primary identifiers of the blockchain, the only way to interpret the blockchain data is by using that entity to track its provenance.

This name-first design can be seen not only in the consensus code and in the ecosystem's block explorers, but also in functions to utilize the domain names. There's a built-in RPC method (not in the protocol, but on every software around it) since the beginning of Namecoin called *name_show* which returns the information about the domain name even during the expired period. This function does not return anything for never-registered domains.

In fact, an expired domain can still be functional. When expired, Namecoin Core will still have the name and return its local state with *name_show* (just indicating the expired status). If the resolver setup accepts it, the domain will still work. Similarly, expired "id/" names in Namecoin still work as logins, which indicates the usefulness of the *name_show* function.

Another built-in RCP method since the early days is *name_history*. This function allows pulling all the metadata and history of a domain name. The existence of this function also indicates the intentions behind Namecoin design: The domain name's history will always come with the domain name itself, so the domain name itself has a provenance.

As mentioned in the introduction of this article, "token" is an abstract term. In Namecoin's context, it is better to offer all interpretations of the terms "token" and "asset".

The lifetime of a Namecoin domain name. Note that this image is a summary representation. In reality, this data is stored in transactions.

Interpretation 1: "The token is the colored coin and that is the asset. Names may be unique but they are cryptographically represented by tokens and only that representation matters. Since a re-registered name is assigned to an entirely new colored coin, the provenance from the earlier UTXO chain is broken, therefore this is a new asset and cannot claim historical value."

Interpretation 2: "The token is the name, and that is the asset. Namecoin is designed around names where names are the main unique identifiers. This is supported by the technical design when you do a typical name transfer or assign a value field to the name. These are all visible on-chain. Further, when the name expires, the data of the name remains on the blockchain. If the blockchain is designed around names and their whole history is on-chain, when the name is re-registered you are simply reactivating the old token, therefore provenance is not broken."

Interpretation 3: "The token is the colored coin because it is a cryptographic representation of the name. But the main collectible asset is the name itself and these names have their own provenance because Namecoin is designed around names as unique identifiers. A name's history and UTXO assignments are all visible on-chain. This is further proven by the existence of *name_show* and *name_history* RPC methods. Therefore when the name is re-registered, the new

colored coin (UTXO chain) can be assumed as a new NFT, but it represents the old decentralized collectible asset which was intact and ownable since its birth."

This third interpretation separates the record into multiple parts:

- Cryptographic token
- Cryptographic asset
- Off-chain asset (For the cases when there is a reference to an external asset, such as Twitter Eggs, Blockheads, Quantum, etc.. Does not exist for Punycodes, Damselfly, Identities, Bit Domains)

According to interpretation #3, if "NFT" is a cryptographic receipt of ownership, then re-registered Namecoin NFTs are "new" receipts of ownership for the "old" blockchain assets. If you recently re-registered a Namecoin name; you minted a new token to own an old asset. Not a tribute, not a replica; but the actual, old, collectible asset.

Disclaimer: As of this writing, I own 11 Namecoin assets in my collection of 80+ NFTs. Those who like collecting Namecoin NFTs mostly accept interpretation #2, and those who disagree mostly accept interpretation #1. I am more inclined to accept interpretation #3 as it fits my understanding of "unique identifiers" for objects in data tables (I'm a data scientist IRL) and how the history of a Namecoin name is determined. To be clear, this interpretation is not in favor of my assets if I want to strictly call them "old NFTs", but it is in favor of my assets if I am happy to call them "old blockchain collectibles".

The argument made in this article is that **meanings matter, not terms**. For collectors and decentralization enthusiasts, what matters is "*owning collectible things in a decentralized way*". An expired Namecoin name (ignoring token or asset definitions for a second) physically exists on a decentralized blockchain *at least* as historical data with its own provenance, even when expired. That data can be owned in a decentralized way. This is what makes it a decentralized collectible.

Part of the debate specifically arises from the term "non-fungible token" itself, which should not limit us if we are aware of the point of NFTs.

Someone who understands the point of NFTs in 2013

So far, the focus has been technical, but there is more at play when we consider the ethical, philosophical, and legal angles. These angles are more subjective but they are worth talking about.

Namecoin NFT Provenance - Ethical & Philosophical

The 2021 NFT bull run convinced a lot of web3 participants that web3 is a paradigm shift and that the ownership philosophy will never be the same. Proponents of this view are strictly pro-CC0, accept the blockchain as the ultimate source of truth, and care much less about the arguments outside the blockchain (even legal arguments).

Critics of this view argue that blockchains can bring a lot of value to creators and collectors but physical, ethical, and universal truths cannot be ignored.

The conflict between Larva Labs vs v1Punks reflects these two distinct opinions. Larva Labs as the original creator of the CryptoPunks had long argued that the buggy v1 contract did not represent their genuine artworks (artist declaration & intention). In contrast, v1Punks owners argued that blockchain timestamp reflected that v1s are the original punks.

A similar debate is occurring for Namecoin NFTs too, but it gets even more philosophical for Namecoin art NFTs.

Ignoring blockchain technicals; if an artwork is created on Namecoin by a creator, then expires, and then gets re-registered by the same artist philosophically speaking the provenance remains.

This is fairly agreed on; but what if an artwork is created on Namecoin by a creator, then expires, and then gets re-registered by *someone else*? Here the camps are again split with different interpretations.

Interpretation 1 arguments:

- Philosophically, the link between the artist's hand and the work is broken, therefore the re-registration by another person cannot claim philosophical provenance.
- It is unethical to squat someone else's work and sell it.

Interpretation 2 arguments:

- Namecoin provides 100% ownership and it is up to the owner to prolong the ownership or not. Philosophically, if the artist does not prolong their ownership, they are making a conscious decision to leave their artwork in public for anyone to claim.
- If the claimers did the marketing around the work and increased its recognition, it is ethical for them to benefit financially.

It gets more complicated when the artwork is not on-chain like Punycodes or Damselfly but instead linked to a file in an external server where the original creator has control. Because in this

case, we are already taking off-chain information into account. What is the asset? Is it the off-chain file, is it the domain name to which the link is attached, or is it the colored coin that corresponds to the domain name?

The philosophical and legal side of the debate turned into a lawsuit for Kevin McCoy's Quantum where there are even more interpretations than the ones outlined above. The wording used in the initial minted NFT and the sale of the Quantum re-minted on Ethereum make this specific debate even more complex. Due to this complexity and lack of legal knowledge on my part, I will not go into further detail on Quantum in this article.

Compromise on Ethical Provenance?

Perhaps there is a way to achieve ethical provenance. Recently Punycodes community (a fairly large one thanks to the fair distribution during rediscovery) was able to find the original creator of 966 Punycodes. The creator was a known artist, ***halluciphile***, who had also created (or contributed to) 15 Rare Pepes, 12 Mafia Wars, 7 Bitcorns, and 19 Kaliedoscopes in the past. Punycodes community rallied around the artist and gave him a warm welcome. Punycodes DAO immediately made halluciphile a DAO member (membership cost ~1E at the time), gifted multiple Punycodes from DAO wallet, and committed to assigning a substantial part of the royalties when Punycodes own vault contract would go live on Ethereum (this is dependent on the development work of a 3rd party service called Emblem Vault). Meanwhile, *halluciphile* expressed happiness that his work found a new life with a large community.

Following this feel-good story, Punycodes announced a manifesto:

> *If an original creator of a historical Punycode ever proves that they're the original creator via the wallet verification message process, Punycodes DAO commits to doing its best to ensure that the original creator receives value. An example of this could be to receive a substantial part of the royalties forever if & when Emblem Vault launches individual contracts for historical collections. Another example could be gifting Punycode assets to the original creator from the DAO wallet, as per the DAO vote (depending on the creator's contribution to the collection).*

Similar manifesto announcements are being planned by other Namecoin communities too. Perhaps by combining the works of the original creators and marketing efforts of the larger communities, Namecoin NFTs can find peace from an ethical and philosophical perspective too.

Collectible Value

The final debate in the historical NFT space seems to be around how much historical NFTs "should be valued". This is often financially motivated, speculative, and subjective, so I prefer not to get into the details. Here I will list some fundamentals and metrics people seem to prioritize (while not necessarily corresponding to financial value):

- **Timestamp:** The unchangeable, objective data on the blockchain.
- **Scarcity:** The number of assets within a collection or an edition.
- **Creativity:** Artistic and conceptual intentions.
- **Technical achievements:** Technical efforts that push the boundaries of the NFT space.
- **Blockchain they're minted on:** For NFTs that require interoperability and composability (such as gaming NFTs), the chain an NFT is minted on can be critical. This is less relevant for historical NFTs but decentralization still matters, as long as maximalism does not blind us. It is important to note that we have seen several examples of significant NFTs making chains more mainstream and relevant, so perhaps the significance of the NFT itself may be much more important than the chain it's minted on.

Conclusion

Debates of semi-fungibility, collectibility, or ownership aspiration are less meaningful and more semantic, considering how arbitrarily we landed on the term "NFTs". As mentioned in the first section of this article, the spirit of the entire NFT movement is "***decentralized collectibility***". As long as a collectible asset satisfies the criteria of "being ownable in a decentralized way", they qualify and contribute to the NFT movement.

One can only hope that with mass adoption, we can move on from the confusing "NFT" term to a less confusing "Decentralized Digital Collectibles" or "Blockchain Collectibles".

Special thanks to Rhea Myers, XCPinata, Daniel Kraft, Casey Rodarmor, Doggfather, and many others who provided feedback and contributions while I was working on this article.

If you'd like to learn more about these early collectibles, I highly suggest 0xSchatz's oldnft.com website. I have no financial or administrative relation to the website, I only provided feedback & data to 0xSchatz when asked.

#2 #1 #3

0xe0dF

Collect Entry

This entry has been permanently stored on-chain and signed by its creator.

ARWEAVE TRANSACTION
YCc_1kekMZTBKxt…boJTcK-xUc63HUA

AUTHOR ADDRESS
0xbA8E220834c32…820C001f022d72E

NFT ADDRESS
0xCc6134BCf32d1…D0FFf54EcC1bD7a

CONTENT DIGEST
MzPWRsesC9mQflx…gX3lacrvaG9Kjko

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